Navy ILE Standard Operating Procedures (SOP) for the Cybrarian Function

Integrated Learning Environment

15 May 2006

List of Effective Pages

Section	Page(s)	Affected paragraph(s)

Change Record

Paragraph	Description of Change	Date	Authorized By

Acronyms, Abbreviations, Definitions

ADS   Authoritative Data Source
ATDLL   Applied Technologies Distributive Learning Laboratory
CCB   Configuration Change Board
CM   Configuration Management
CR   Change Request
ELO   Enabling Learning Object
GAT   Government Acceptance Testing
ILE   Integrated Learning Environment
IMR   Integrated Metadata Repository
ISD   Instructional Systems Designer
IT   Information Technology
LCMS   Learning Content Management System
ODS   Operational Data Source
SOP   Standard Operating Procedures
SOW   Statement Of Work
TLO   Terminal Learning Object

See the ILE website for a list of acronyms, abbreviations and definitions.

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1.0   Introduction

The ILE Cyber-Librarian (Cybrarian) function was established by the Sea Warrior Deputy IT Program Manager to provide content management support for learning products being developed in support of the ILE and Sea Warrior programs. The Cybrarian is headquartered at the Applied Technologies Distributed Learning Laboratory (ATDLL) at NAVAIR-Orlando and works as a tightly integrated team with designated Learning Center personnel and the ILE Infrastructure Support Team located at Saufley Field, Pensacola, FL.

2.0   Purpose

The purpose of this document is to outline the Standard Operating Procedures (SOP) for the Cybrarian function. Adherence to this SOP ensures the standardization of Cybrarian activities and related processes within the ILE environment. The primary audience for this document would be those organizations tasked with developing, storing, retrieving, or exposing learning content in support of Sea Warrior and ILE programs. A secondary audience for this document would be those organizations with processes that may either contribute to or benefit from the processes and procedures identified herein.

Specific functions performed by the Cybrarian are described in Section 3 of this document.

3.0   Procedures

Cybrarian has been tasked to provide the following functions:

- Learning Content Configuration Management Support (paragraph 3.1)
- Learning Content Distribution (paragraph 3.2)
- Learning Content Review Support (paragraph 3.3)
- Learning Content Statement Of Work (SOW) Review Support (paragraph 3.4)
- Learning Content Developers Vendor Support (paragraph 3.5)

The following sections describe the processes for each of the above functions.

3.1   Learning Content Configuration Management Support

The Cybrarian provides Configuration Management (CM) support for learning content. Configuration management relates to managing changes to learning content within the repository and tracking the CM change process.

The purpose of the Learning Content Configuration Management Support function is to address how learning content enters into configuration control, how content changes are made to content under configuration control, and how those changes are promulgated to applicable systems and end users. To support the Learning Content Configuration Management Support function, the Cybrarian utilizes the following processes:

- Learning Content Submission Process (paragraph 3.1.1)

- Learning Content Change Request Process (paragraph 3.1.2)
- Level 1 Learning Content Change Process (paragraph 3.1.3)
- Level 2 and Level 3 Learning Content Change Process (paragraph 3.1.4)

3.1.1 Content Submission Process

Learning Content enters configuration control through the Content Submission Process. The Content Submission Process is supported by the developers who create learning content, a Learning Content Sponsor who approves and submits learning content for the ILE, the ILE Infrastructure Support Team that tests and delivers content, and the Cybrarian and learning center Knowledge Managers (KM) who evaluate and make content available via the content repository.

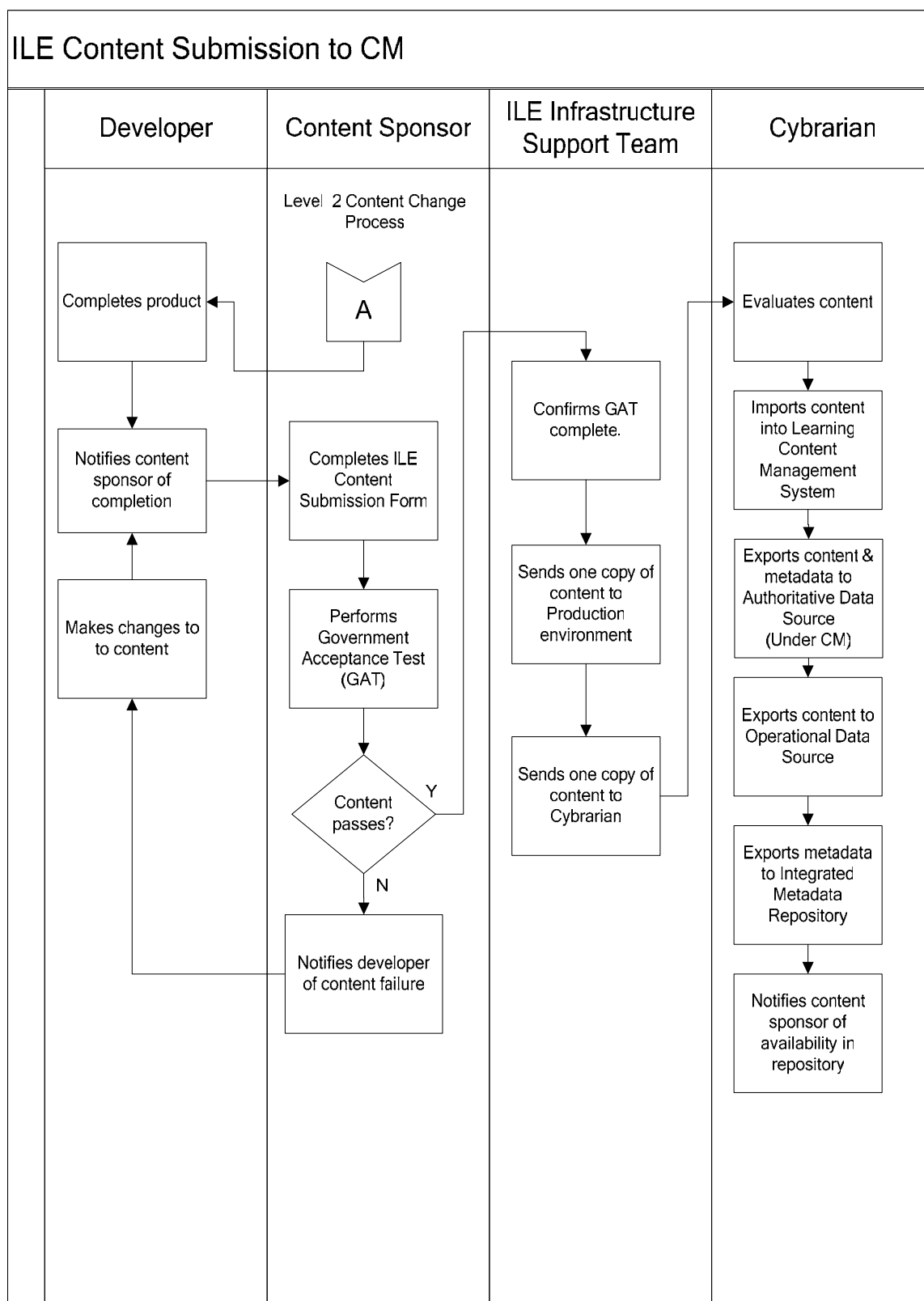Figure 1 depicts the Content Submission Process.

ILE Content Submission to CM

Developer	Content Sponsor	ILE Infrastructure Support Team	Cybrarian

Level 2 Content Change Process

A

Completes product

Notifies content sponsor of completion

Makes changes to to content

Completes ILE Content Submission Form

Performs Government Acceptance Test (GAT)

Content passes? — Y / N

Notifies developer of content failure

Confirms GAT complete.

Sends one copy of content to Production environment

Sends one copy of content to Cybrarian

Evaluates content

Imports content into Learning Content Management System

Exports content & metadata to Authoritative Data Source (Under CM)

Exports content to Operational Data Source

Exports metadata to Integrated Metadata Repository

Notifies content sponsor of availability in repository
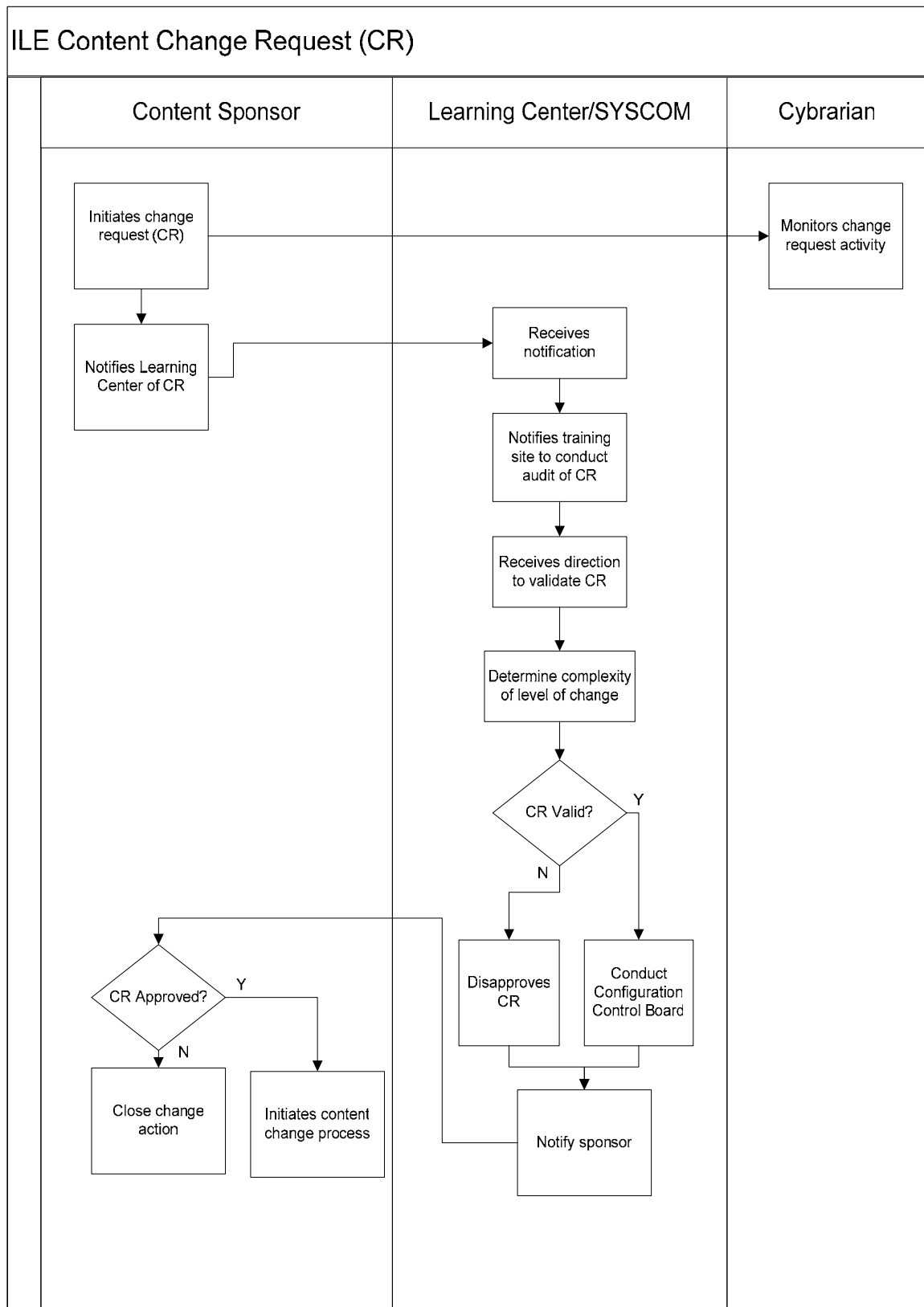
Figure 1 Content Submission Process

3.1.2 Content Change Request Process

Changes to content under configuration control are initiated through the Content Change Request Process. The Content Change Request Process is supported by a Learning Content Sponsor who initiates and manages change requests, the Learning Centers that review change requests, and the Cybrarian who monitors change request activity.

Figure 2 depicts the Content Change Request Process.

ILE Content Change Request (CR)

Content Sponsor	Learning Center/SYSCOM	Cybrarian

Content Sponsor

Initiates change request (CR)

Notifies Learning Center of CR

CR Approved?
Y
N

Close change action

Initiates content change process

Learning Center/SYSCOM

Receives notification

Notifies training site to conduct audit of CR

Receives direction to validate CR

Determine complexity of level of change

CR Valid?
Y
N

Disapproves CR

Conduct Configuration Control Board

Notify sponsor

Cybrarian

Monitors change request activity
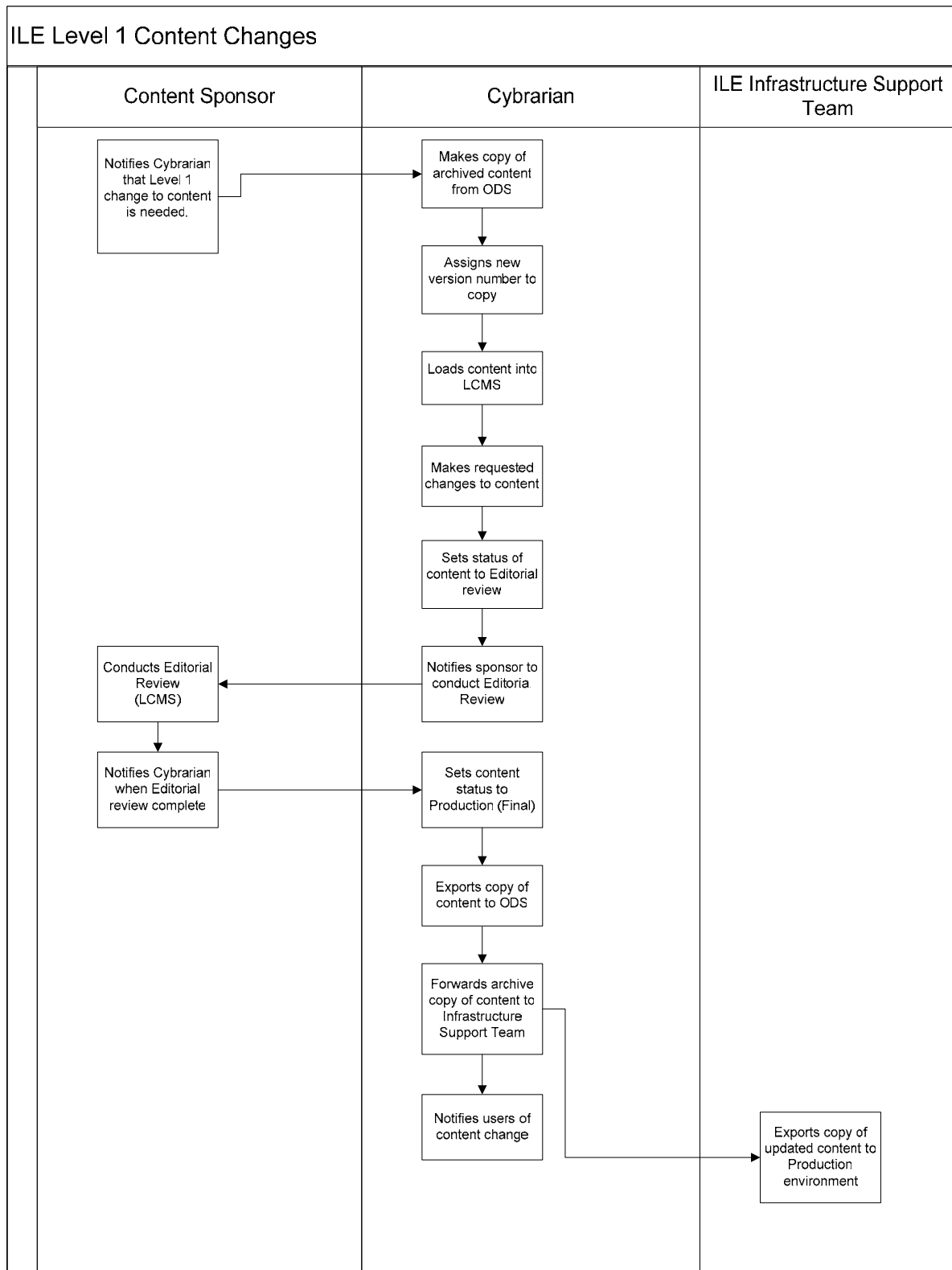
Figure 2 Content Change Request

3.1.3 Level 1 Content Change Process

When minor changes are needed for content under configuration management, the Level 1 Content Change Process is used. The Cybrarian, with support of the ATDLL, assists the Content Sponsor in making Level 1 Learning Content changes. Learning Content changes designated as Level 1:

- Require *minor* graphics changes, and/or
- Changes do not exceed 15% of total content, and/or
- Require little or no Instructional Systems Designer (ISD) support

The Level 1 Content Change Process is supported by a Content Sponsor, who requests and approves learning content changes, the Cybrarian who makes the requested changes, and the ILE Infrastructure Support Team that implements the changes in the delivery environment.

Figure 3 depicts the Level 1 Content Change Process.
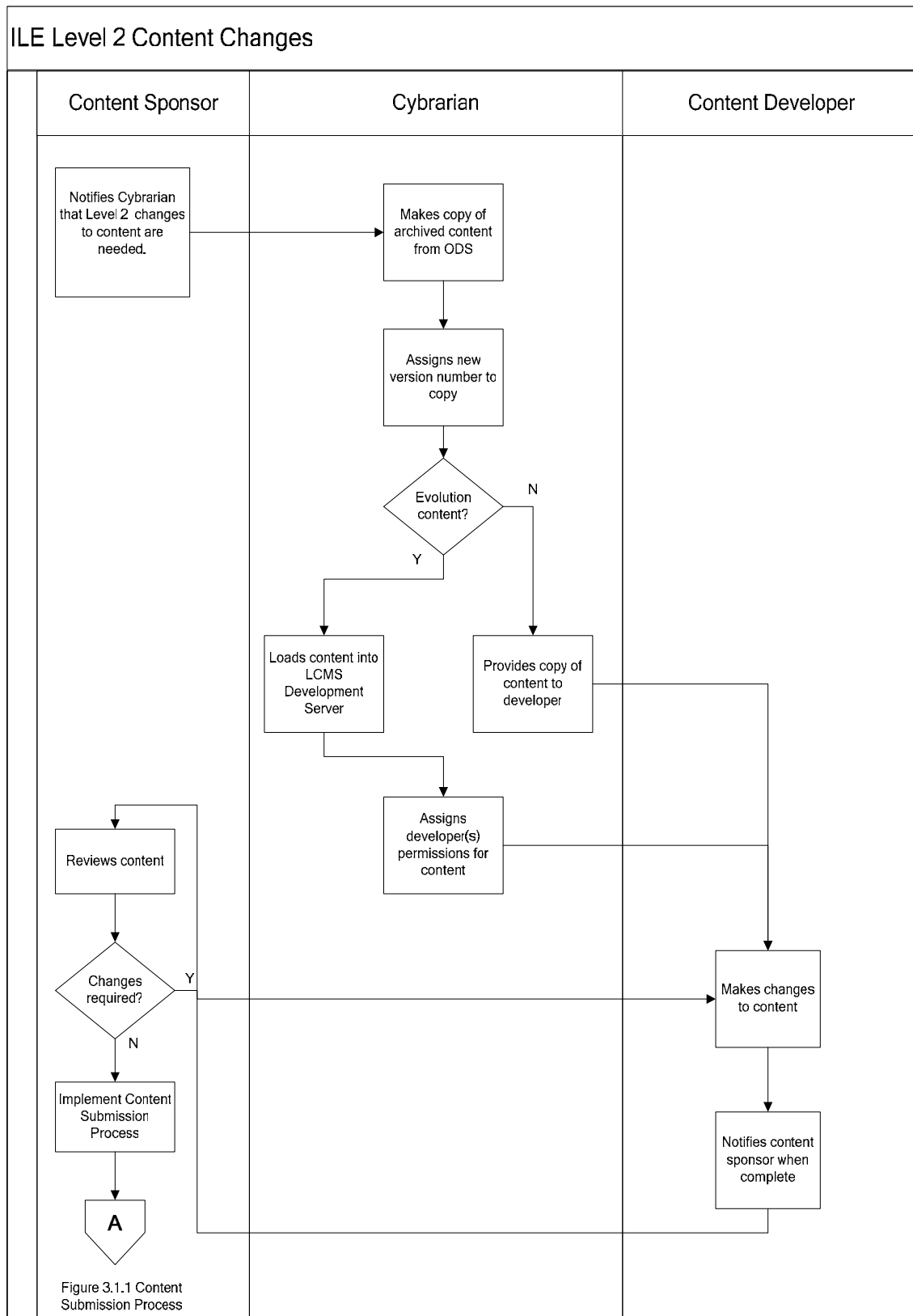
Figure 3 Level 1 Content Changes

3.1.4 Level 2 Content Changes

When significant changes are required to learning content under configuration management, the Level 2 Content Change Process is used. The Level 2 Content Change Process is supported by a Content Sponsor who requests and approves learning content changes, the Cybrarian who makes the copies of the source content available, a developer (typically a support vendor) who makes the requested changes and the ILE Infrastructure Support Team that updates the delivery environment with the changed content.

Learning Content changes designated as Level 2:

- Require *moderate*/extensive graphics changes, and/or
- Changes exceed 30% of total content, and/or
- Require *some* Instructional Systems Designer (ISD) or Subject Matter Expert (SME) support

Figure 4 depicts the Level 2 Content Change Process.

ILE Level 2 Content Changes

Content Sponsor	Cybrarian	Content Developer

Notifies Cybrarian that Level 2 changes to content are needed.

Makes copy of archived content from ODS

Assigns new version number to copy

Evolution content?   N

Y

Loads content into LCMS Development Server

Provides copy of content to developer

Reviews content

Assigns developer(s) permissions for content

Changes required?   Y

N

Makes changes to content

Implement Content Submission Process

A

Figure 3.1.1 Content Submission Process

Notifies content sponsor when complete

Figure 4 Level 2 Content Changes

3.2   Learning Content Distribution for Reuse and Repurpose

The Cybrarian function provides Learning Content Distribution support to developers supporting new contracts or in-house development efforts. The purpose of the Learning Content Distribution function is to provide content developers access to existing learning content for reuse and repurpose.

To support the Learning Content Distribution Function, the Cybrarian utilizes the following processes:

- Content Data Flow Process
- Content Checkout Process

3.2.1 Content Data Flow

From the point of development to the point learning content is available for discovery, content is exchanged through a number of systems and users.

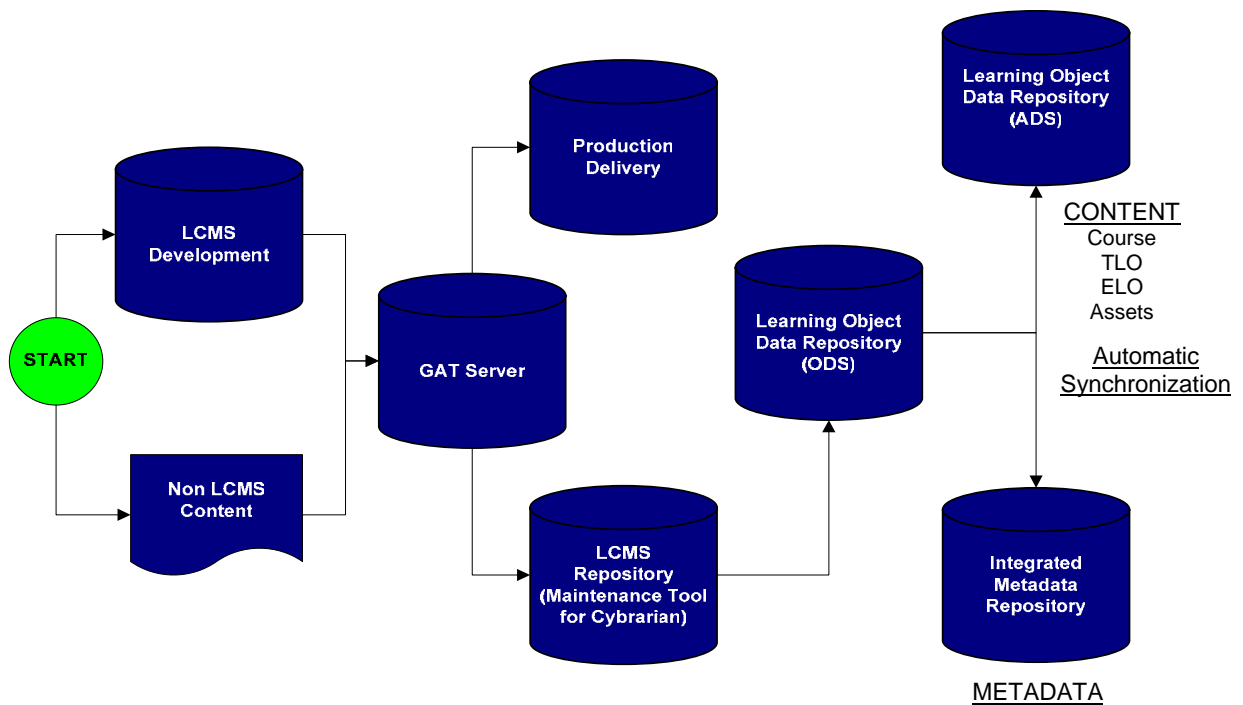Figure 5 and Table 1 below describe the data flow for content.

Figure 5 Content Data Flow

Table 1 Content Data Flow – What Happens

Stage	What Happens
1	Content is submitted through the ILE Support Team Government Acceptance Testing (GAT) Environment
2	Learning content that meets established requirements is then placed into production
3	Accepted content is concurrently replicated to the Cybrarian LCMS repository, where it is disaggregated into learning event components
4	Content is loaded into an Object Data Source (ODS) database.
5	Learning Object Data is then copied to the Authoritative Data Source (ADS) The ADS contains "Gold" copies of Learning Object Data under strict configuration management (CM) control.
6	Metadata identifiers are copied to the Integrated Metadata Repository (IMR) for search and discovery purposes

3.2.2 Content Checkout Process

The Cybrarian supports the Content Distribution Function by search and discovery of existing learning content. This process is supported by the Learning Content Sponsor, who requests content developer access to the Integrated Metadata Repository (IMR), the Cybrarian who provides access to the IMR, and the Content Developer who performs searches and downloads content.

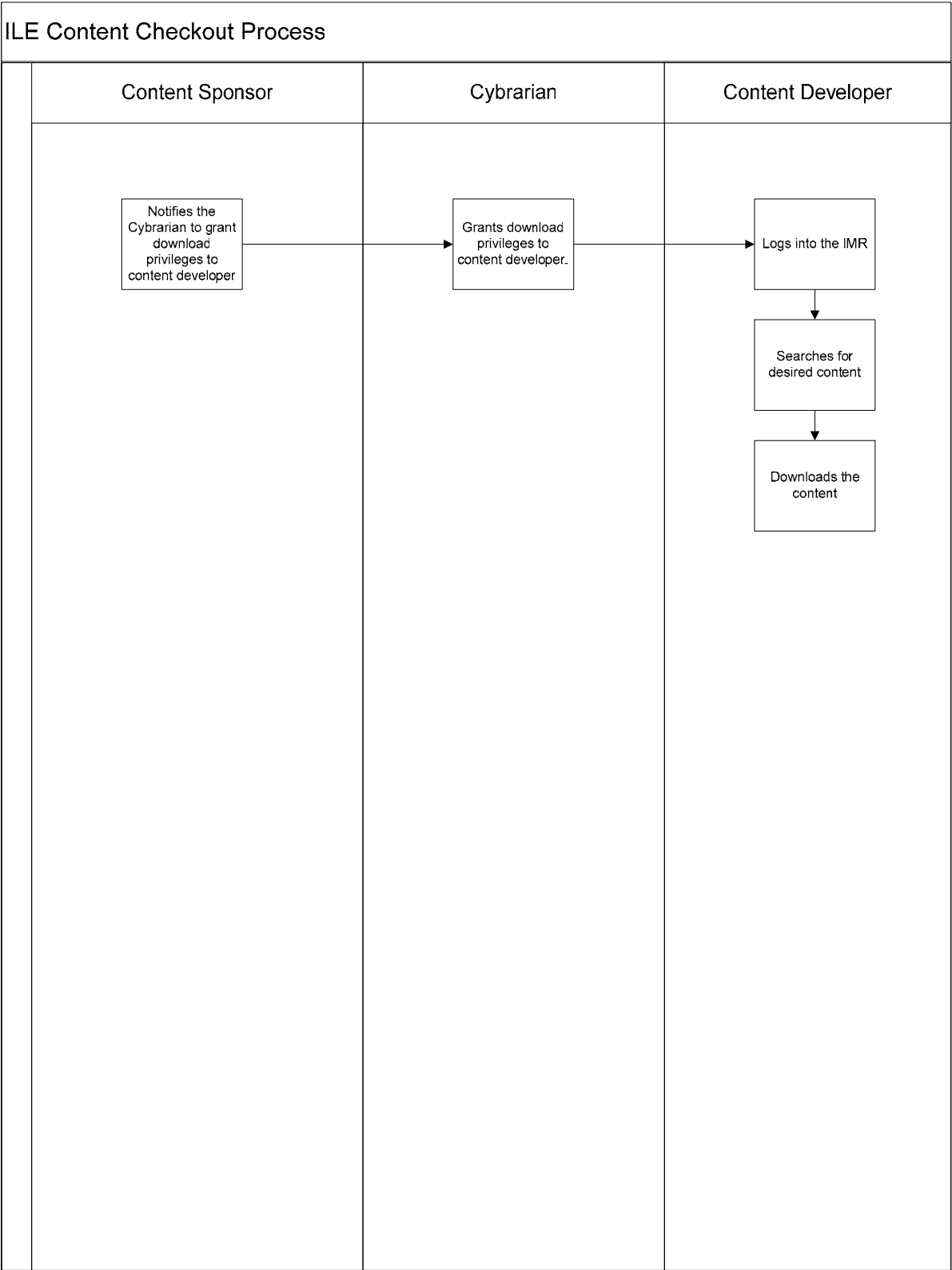Figure 6 depicts the Content Checkout Process.

ILE Content Checkout Process

Content Sponsor	Cybrarian	Content Developer
Notifies the Cybrarian to grant download privileges to content developer	Grants download privileges to content developer.	Logs into the IMR
		Searches for desired content
		Downloads the content

Figure 6 Content Checkout Process

3.3   Learning Content Review Support

The Cybrarian provides Learning Content Review Support for learning content development efforts. The purpose of the Learning Content Review Support Function is to ensure that content contained within the repository is up-to-date and technically accurate.

The Learning Content Review Process is supported by the Cybrarian who notifies content sponsors when reviews are required, a Learning Content Sponsor who coordinates content reviews and approves the technical accuracy of content, and the ILE Infrastructure Support Team that removes expired content from the delivery environment.

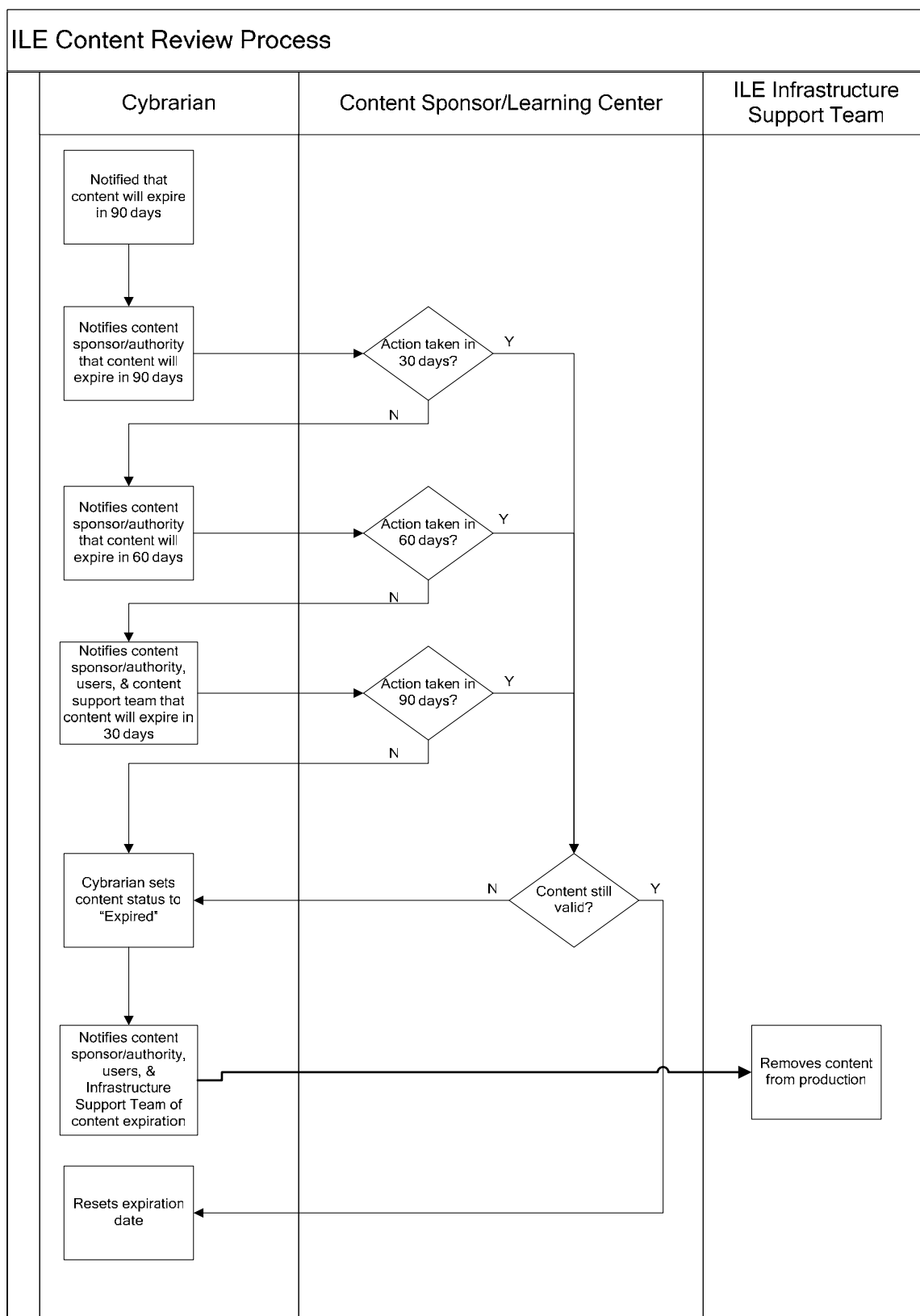Figure 7 depicts the Learning Content Review Process.

ILE Content Review Process
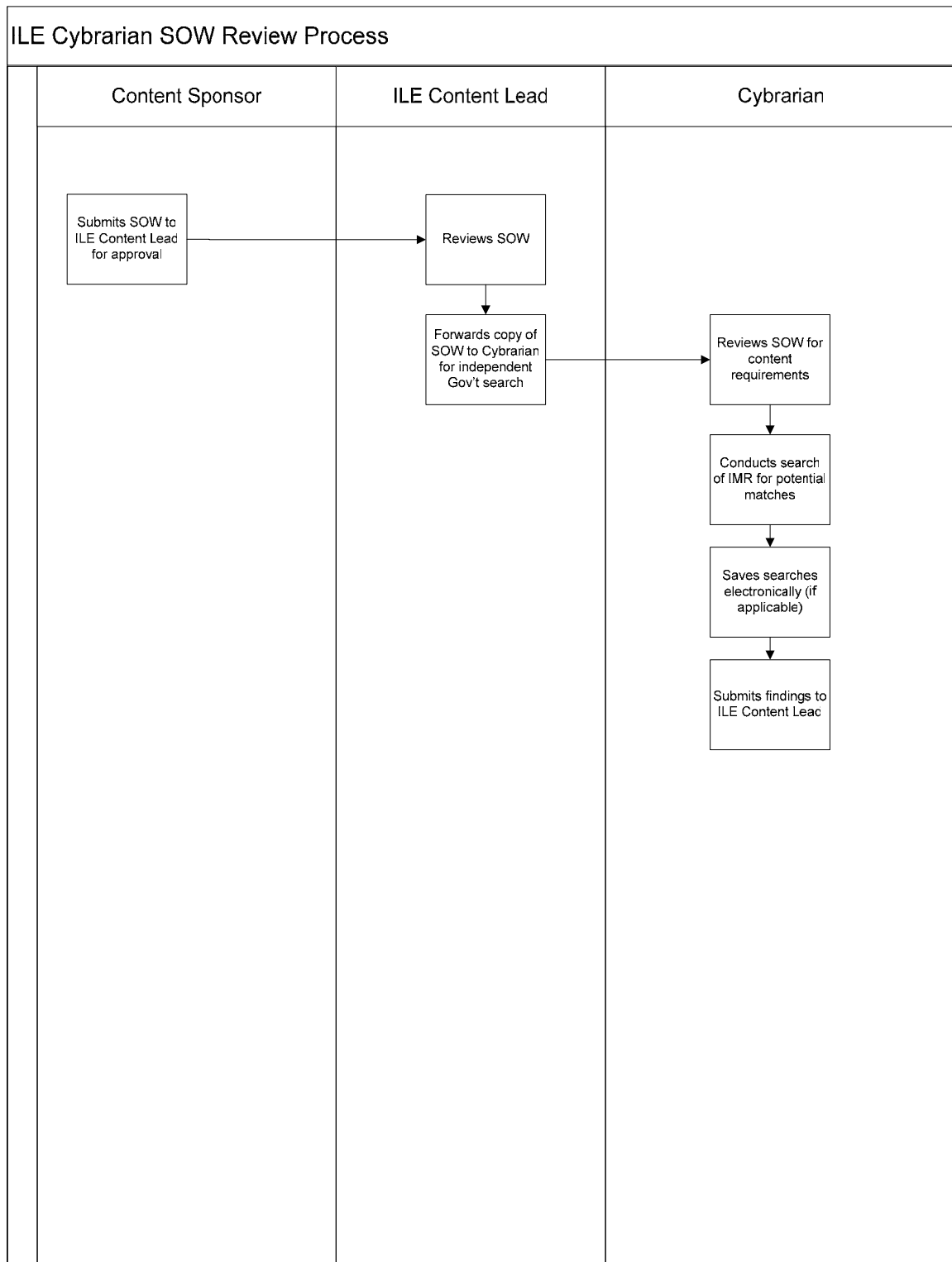

Figure 7 Content Review Process

3.4   Learning Content SOW Review Support

The Cybrarian provides Statement of Work (SOW) Review Support for the ILE Content Lead.

The purpose of the SOW Review Support function is to ensure that learning content requirements for ILE compatibility are identified in the preliminary SOW. The Cybrarian also provides a search (discovery) of existing content, hosted in the Cybrarian repository, for reuse and/or repurpose of learning content.

The SOW Review Support Process is supported by a Learning Content Sponsor who submits the SOW for approval, the ILE Content Lead and Cybrarian who reviews the SOW, and the Cybrarian who searches the repository for potential content to support the SOW requirements.

Figure 8 depicts the SOW Review Process.

ILE Cybrarian SOW Review Process

Content Sponsor	ILE Content Lead	Cybrarian

Submits SOW to ILE Content Lead for approval → Reviews SOW

Forwards copy of SOW to Cybrarian for independent Gov't search → Reviews SOW for content requirements

Conducts search of IMR for potential matches

Saves searches electronically (if applicable)

Submits findings to ILE Content Lead

Figure 8 SOW Review Process

3.5   Learning Content Developers Vendor Support

The Cybrarian provides learning content vendor support for training product developers.

The purpose of this function is to provide learning content developers supporting ILE projects with guidance and support throughout their development efforts.

This process is supported by a Developer who poses content development questions, an ILE Infrastructure Support Team Help Desk that acts as the initial gateway to obtaining ILE support, and the Cybrarian who provides answers to questions related to ILE guidance and system issues.

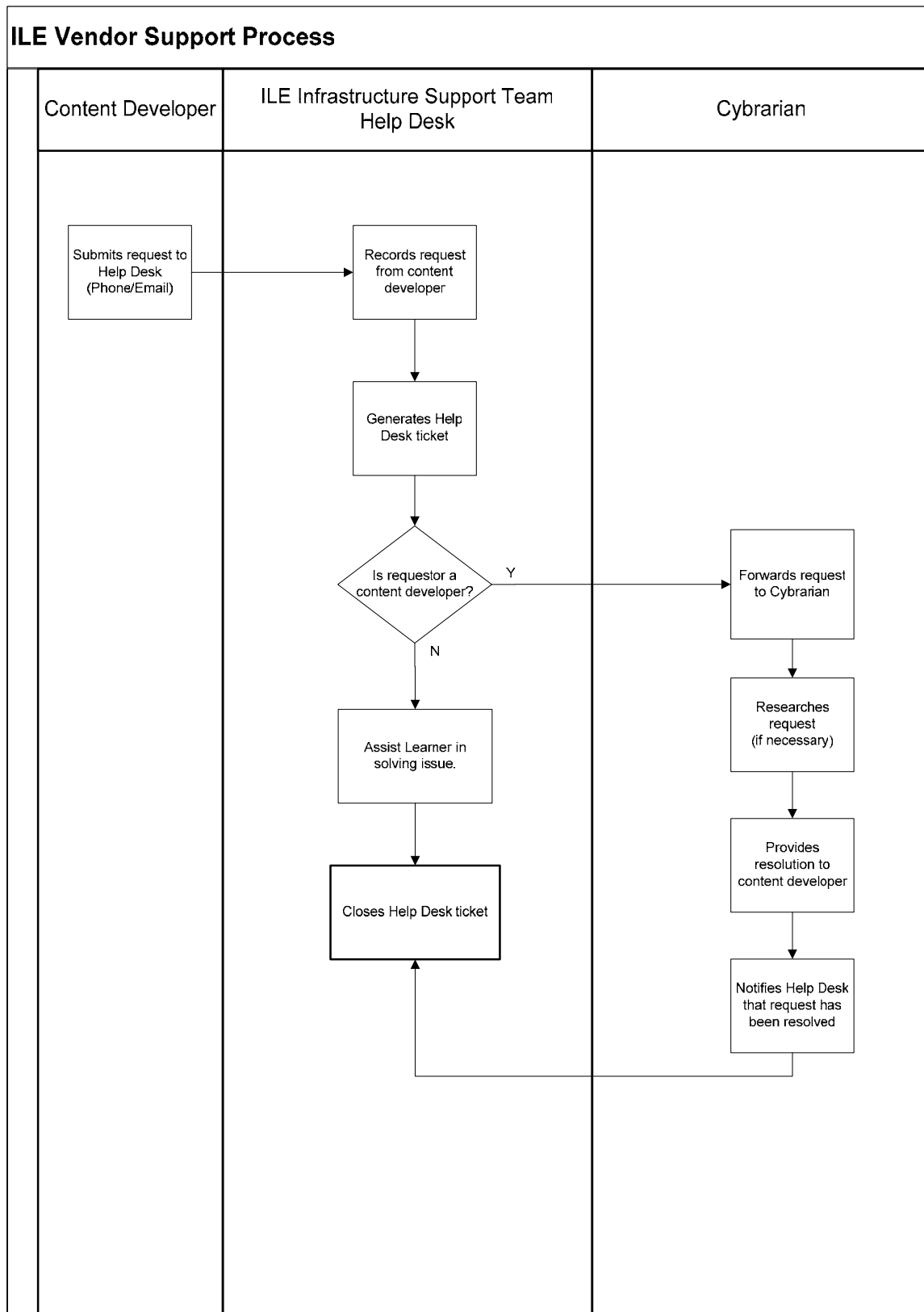Figure 9 depicts the Vendor Support Process.

ILE Vendor Support Process

Figure 9 Vendor Support